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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,926	08/07/2001	Shinji Tanaka	1265-01	1861

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IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP
1650 MARKET ST
SUITE 4900
PHILADELPHIA, PA 19103

EXAMINER	
GILLIAM, BARBARA LEE	
ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/890,926	TANAKA ET AL.	
	Examiner	Art Unit	
	Barbara L. Gilliam	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/18/2004 & 12/6/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2 and 4* is/are allowed.

6)☒ Claim(s) *6,10 and 11* is/are rejected.

7)☒ Claim(s) *3 and 5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed October 18, 2004 has been entered and fully considered.

2. The 112, 2nd paragraph rejection of claims 2-5 and 11 is withdrawn in light of the amendment.

3. Claims 2 – 6, 10 and 11 are present. Claims 1, 7-9 are canceled.

Claim Objections

4. Claims 3 and 5 are objected to because of the following informalities: In line 6 of independent claim 3, the range of "0.1–30% by weight" is out of place. As written, it appears the second layer of the photocoloring double layer is present in an amount of 0.1-30% by weight instead of the thermal color former. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for water-soluble resins, hydrophobic resins and UV-curable resins, does not reasonably provide enablement for hydrophilic resins. The specification does not enable any person skilled in the art to which it pertains, or with which it is most

nearly connected, to make and use the invention commensurate in scope with these claims. There is no support for hydrophilic resins, only water-soluble resins. Since the terms are not synonymous, they are not interchangeable.

7. Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is nothing in the specification to suggest the photocoloring layer and the optional substance diffusion-preventing layer are removable with a developer. See page 20, line 4 – page 22, line 18. It is not clear how the photocoloring layer and the optional substance diffusion preventing layer are removed.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 10-11 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 11-352670 A (translation previously provided).

a. In JP 11-352670 A, Hiroshi et al. teach an original plate for photosensitive printing comprising a support, a photopolymerizable layer and a masking layer which anticipates the photosensitive resin printing plate of the present application. The photopolymerizable layer of Hiroshi et al., comprising an elastomeric binder [0010]-[0011] and a polyacrylamide or polyvinyl alcohol [0014], an ethylenic unsaturated compound [0015] and a photoinitiator [0016], meets the present limitations for the photosensitive layer. Hiroshi et al. do not specifically teach the thickness of the photopolymerizable layer however the thermosensitive layer has a thickness of 125 μm (0.125 mm) [0029] and in Example 1 [0034] the entire plate has a thickness of 2.8 mm, therefore at most the thickness of the photopolymerizable layer is 2.675 mm. The masking layer of Hiroshi comprises at least an infrared photothermal conversion layer (B-a) which has a material which converts an infrared ray to heat and a thermosensitive layer (B-b) which becomes substantially opaque with heat at the active light ray of non-infrared rays and a cover film if necessary (claim 1). The material of the photothermal layer (B-a) can be carbon black or an infrared ray absorbing pigment or dye such as cyanine dye, which absorbs in the region of 750 – 20,000 nm [0018]. This material meets the present limitations for the photothermal-transforming substance. The thermosensitive layer comprises a leuco pigment and a color developer [0019], which meet the present limitations for the thermal color former, and the developer respectively. A production method is claimed which comprises the removal of the cover film, imagewise exposure with infrared laser light to make the mask of layer (B-b) followed by whole surface exposure through the mask with active light ray of non-infrared rays and removal of the non exposed areas through development (claim 5). The

active light ray use to expose the whole surface of the plate has a wavelength of 150 – 600 nm (preferably 300- 400 nm) [0025].

10. Claims 6, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Barzynski et al. (US 4,555,471).

a. The image recording materials of Barzynski et al. meet the present limitations for the photosensitive resin printing plate material. Specifically, base, relief-forming layer (RL), intermediate layer (I) and mask-forming layer (ML) (see abstract; column 7, lines 40-65) meet the present limitations for the support, photosensitive resin layer, transfer-preventing layer and photocoloring layer respectively. Suitable materials for the relief-forming layer include polymeric binders such as polyvinyl alcohol and its derivatives and polyvinyl acetates, ethylenically unsaturated, photopolymerizable compounds and photoinitiators (column 6, line 24 – column 7, line 40). The intermediate layer has a thickness from 5 to 135 μm (.005 to 0.135 mm) (column 7, lines 64-65). Suitable resins for the intermediate layer include polyethylene (column 7, lines 41-53) which meets the present limitations for the hydrophobic resin. The mask-forming layer contains thermochromic system which when irradiated with an IR laser having a wavelength greater than 1.00 μm (1000 nm) undergoes an irreversible change in its absorption spectrum in the range from 300 to 420 nm. It can be such that before being irradiated with the IR laser, it has a low optical density with the optical density increasing as a result of irradiation or the reverse can be true (column 2, line 48 – column 4, line 5). The development is described in the Examples 2-4 and in column 8, lines 48-52.

Response to Arguments

11. Applicant's arguments filed October 18, 2004 have been fully considered but they are not fully persuasive.

a. With respect to Claims 2 and 4 and JP '670, Applicant argued that the photosensitive resin layer of JP '670 has photocoloring double layers as opposed to the photocoloring single layer of Claim 2. Applicant's arguments are persuasive. Claims 3 and 5 are supported by priority document 11/350793. Accordingly the rejection of Claims 2-5 over JP '670 is withdrawn.

b. The rejection of Claims 10-11 is maintained because the two layer construction (photothermal layer and thermosensitive layer) of JP '670 meets the present limitations for the photocoloring layer.

c. Applicant's arguments with respect to the rejection of Claims 2-5, and 9 over Barzynski are persuasive. Accordingly the rejection over Claims 2-5 and 9 is withdrawn.

d. Applicant's arguments with respect to the rejection of Claim 6 over Barzynski are not persuasive. Applicant argued the intermediate layer of Barzynski is made of thermoplastic resin which is in contrast to the transfer-preventing layer of the present Claim 6. The Examiner strongly disagrees. Barzynski specifically discloses hydrophobic resin including polyethylene, polypropylene, a polyester, e.g. polyethylene terephthalate as suitable for the intermediate layer (column 7, lines 49-53), all of which are disclosed as examples of hydrophobic resins suitable for the use in the transfer-preventing layer at page 17 of the specification, lines 10-11. Applicant further argued

the thermoplastic resins are not developed is not developed unlike the resins of the present application. Applicant is reminded that a chemical composition and its properties are inseparable i.e. the polyethylene of Barzynski and of the present application are expected to have the same characteristics. See MPEP 2112.01 II. Additionally, Applicant is arguing limitations not present in the claims. Claim 6 is a product claim. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

e. Applicant's arguments with respect to the rejection of Claims 10-11 over Barzynski are not persuasive. Applicant argued Barzynski fails to disclose the development of the photosensitive resin layer, the photocoloring layer and an optional substance diffusion-preventing layer. The Examiner disagrees. As pointed out in the 112, 1st paragraph rejection, the specification only supports the development of the photosensitive resin layer. See page 20, line 4 – page 22, line 18. It is not clear if the photocoloring layer and the optional substance diffusion preventing layer are dissolved along with the photosensitive layer as argued by Applicant. In addition, at column 8, lines 48-52, of Barzynski the relief is developed in an conventional matter such as by washing out the layer with suitable solvent after the intermediate layer together with the mask layer is removed from the exposed relief-forming layer.

Allowable Subject Matter

12. Claims 2 and 4 are allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: See paragraphs 11a. and 11c.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara L. Gilliam whose telephone number is 571-272-1330. The examiner can normally be reached on Monday through Thursday, 8:00 AM - 5:30 PM.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

b. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Barbara L. Gilliam

Barbara L. Gilliam
Primary Examiner
Art Unit 1752

bg
January 6, 2005